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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,595	03/08/2002	Philippe Nogaret	Q68811	1076

7590 08/06/2004
SUGHRUE MION, PLLC
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EXAMINER

TIBBITS, PIA FLORENCE

ART UNIT PAPER NUMBER

2838

DATE MAILED: 08/06/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/092,595	Applicant(s) NOGARET ET AL.	
	Examiner Pia F Tibbits	Art Unit 2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 March 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/8/2002</u> . | 6) <input type="checkbox"/> Other: ____. |

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DETAILED ACTION

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the conventional names, as described in the specification, e.g. current sensor, autonomous power supply, traction module, motor, comparator, control unit for the elements shown in figures 1 and 2 with non-conventional symbols. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to under 37 CFR 1.83(a) because they fail to show (the overhead contact line voltage being measured by means of) **a sensor** as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures

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appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification. For example, the statement "The output of the comparator 20 is fed to a block 21 which calculates a set point voltage $U_{bus/ref}$ close to the overhead contact line voltage in order substantially to cancel out the current I_{ext} , the overhead contact line voltage being measured by means of a sensor in order to preset the voltage $U_{bus/ref}$ to a value around the overhead contact line voltage; the sensor transmits the set point voltage $U_{bus/ref}$ to a control unit 22" needs to describe what the overhead contact line voltage is.

Claim Objections

5. Claims 1 and 5 objected to because of the following informalities: "an external power supply infrastructure", second occurrence should be replaced by ---the external power supply infrastructure---. Appropriate correction is required.

Claim Rejections - 35 USC § 103

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Gibard** [6294886].

Gibard discloses in figures 1-4 a system for controlling the supply of electrical power to an electrically propelled vehicle designed to operate in an autonomous power supply mode or in an external power supply mode as a function of the presence or absence of an external power supply infrastructure 3 along the route of said vehicle, which includes an uninterrupted power supply bus connected both to an autonomous power supply system 5 on board said vehicle and to an external power supply line that can be connected to an external power supply infrastructure 3 by means of a connection member 2 [see also the abstract; column 3, lines 38-67]. Gibard does not disclose **one** uninterrupted power supply bus because control traction system 1 is connected through line 18 and a current sensor 40 to the external power supply infrastructure 3, and through line 17 to the autonomous power supply system carried on board the vehicle 5.

With regard to the particular location of the control traction system 1 in the Gibard reference, i.e., connecting through one bus to the external power supply infrastructure and through another bus to the autonomous power supply system carried on board the vehicle, absent any criticality, is only considered to be an obvious modification as it has been held by the courts that there would be no invention in shifting the location of a structure of a device to another location if the operation of the device would not thereby be modified in order to provide uninterrupted power to the vehicle. *In re Japikse*, 86 USPQ 70.

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As to claim 6, Gibard discloses that the motor is associated with a variable-frequency electronic supply device 11, which makes it possible to regulate a fixed voltage as a function of the speed of the motor 10. The supplying of one phase of the motor 10 with the aid of an IGBT transistor bridge 12 is represented in fig. 1. Thus the supply voltage of the kinetic accumulation of energy system on the high voltage network is fixed at a value of between 700 V and 800 V enabling the traction system 1 to function in an identical manner whether it be supplied via the external power supply infrastructure/catenary 3 (typical voltage of 750 V) or via the kinetic accumulation of the autonomous power supply system on board said vehicle/energy system 5 [see also column 3, lines 13-27].

As to claim 7, Gibard discloses a flywheel for accumulating kinetic energy [see also the abstract].

As to claim 8, Gibard discloses pantograph means 2 [see also the abstract].

8. Claims 1-6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Brown** [6646360].

Brown discloses in figures 1-11 a system and method for controlling the supply of electrical power to an electrically propelled vehicle designed to operate in an autonomous power supply mode or in an external power supply mode as a function of the presence or absence of an external power supply infrastructure/external source P_L along the route of said vehicle, which includes an uninterrupted power supply bus connected both to an autonomous power supply system P_D on board said vehicle and to an external power supply line that can be connected to an external power supply infrastructure by means of a connection member 617 [see also the abstract; column 1, lines 29-54; column 5, lines 65-67; column 6, lines 1-10; . Brown does not disclose specifically that the system includes a current sensor for measuring the current flowing in said external power supply line in order to detect connection of said connection member to said external power supply structure.

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However, Brown discloses a system connecting a low-voltage/high-current source P_L to supply additional power to a high voltage load without appreciably dropping the flow of power to the load or raising the voltage of the load while operating within the rating constraints of the first and second sources P_D , P_L such that the power transfer is seamless, i.e., transparent to the load. As such, no anomalies in power (current or voltage interruptions, spikes, etc.) are sensed by the load. The invention doubles the current rating of a high-voltage low-current source P_D , allowing it to operate indefinitely (i.e., extended periods of time) at increased currents required by a series connection with a low-voltage high-current source P_L in order to operate a load at a higher power level [see also column 1, lines 29-43]. Therefore, it is an inherent function of the controller in Brown's system to continuously monitor the current flowing in said external power supply line in order to detect connection of said connection member to said external power supply structure, and MPEP 2100 states that the disclosure of a limitation may be expressed, implicit or **inherent**.

As to claim 6, Brown discloses that the controller (TCU) 490, which has as a load an inverter is able to compensate for variations in the input voltage connected to the inverter's DC link and maintains the load at full power. Therefore, in addition to its normal function of controlling the load inverter, the controller also independently adjusts the excitation to vary the inverter input voltage during the connection sequence to provide a smooth transition to series operation while under load. This provides a seamless series connection to the external source [see also column 7, lines 62-67; column 8, lines 1-8].

As to claim 8, Brown discloses a pantograph 417.

With respect to the method claims 1-4: the method steps will be met during the normal operation of the apparatus described above.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited in PTO-892 and not mentioned above disclose related apparatus.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Pia Tibbits whose telephone number is (571) 272-2086. If unavailable, contact the Supervisory Patent Examiner Mike Sherry whose telephone number is (571) 272-2084. The Technology Center Fax number is (703) 872-9306.

12. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PFT

August 3, 2004

Pia Tibbits

Primary Patent Examiner